What is claimed is:

1. An image retrieval device for retrieving an image being similar to an inquired image from images stored in an image database comprising:

a first coefficient transforming means for transforming a first group of image feature descriptors extracted from image data accumulated in said image database and then generating a second group of image feature descriptors to be used for calculating similarity;

a second coefficient transforming means for transforming a first group of image feature descriptors extracted from image data of said inquired image and then generating a second group of image feature descriptors to be used for calculating similarity; and

a similarity calculating means for calculating similarity by comparing said second group of image feature descriptors for each piece of image data generated by said first coefficient transforming means with said second group of image feature descriptors transformed by said second coefficient transforming means.

2. The image retrieval device according to Claim 1, further comprising an image feature descriptor storing means and wherein said similarity calculating means compares said second group of image feature descriptors of image data of said inquired image received from said second coefficient transforming means with said second group of image feature descriptors of image data

contained in said image database read from said image feature descriptor storing means.

3. The image retrieval device according to Claim 1, wherein said first coefficient transforming means and said second coefficient transforming means perform transform of image feature descriptors in a manner that visual similarity between images to be compared is approximated by a distance between an image expressed by said second group of image feature descriptors of image data contained in said image database and an image expressed by said second group of image feature descriptors of image data of said inquired image.

4. The image retrieval device according to Claim 1, wherein said first coefficient transforming means and said second coefficient transforming means use, as said image feature descriptor, a transform coefficient obtained by performing specified transforming processing of coefficient on image data.

5. The image retrieval device according to Claim 4, wherein said first coefficient transforming means and said second coefficient transforming means perform a transform of coefficient using a transform table selected depending on a kind of transform coefficient to be used as said image feature descriptor and wherein said first coefficient transforming means and said second coefficient transforming means perform retrieval of a similar-image on a trial basis using a plurality of said transform tables each having a differently segmented range of said transform

coefficient and select a transform table which has showed a high rate of correctly solved retrieval in said retrieval on said trial basis.

6. The image retrieval device according to Claim 4, wherein said first coefficient transforming means and said second coefficient transforming means perform transform of said coefficient in a manner that fine quantization is carried out on a range of a portion of each of said transform coefficients having a small amplitude and that coarse quantization is carried out on a range of a portion of each of said transform coefficients having a large amplitude.

7. The image retrieval device according to Claim 4, wherein said first coefficient transforming means and said second coefficient transforming means perform a transform of said coefficient in a manner that fine quantization is carried out on said coefficient having a small power and coarse quantization is carried out on said coefficient having a large power.

8. The image retrieval device according to Claim 6, wherein said first coefficient transforming means and said second coefficient transforming means perform a transform of said coefficient in a manner that fine quantization is carried out on said coefficient having a small power and coarse quantization is carried out on said coefficient having a large power.

9. An image retrieval device for retrieving an image being

similar to an inquired image from images stored in an image database comprising:

a coefficient transforming means for transforming a first group of image feature descriptors extracted from image data accumulated in said image database and from image data of said inquired image and then generating a second group of image feature descriptors used to calculate similarity; and

a similarity calculating means for comparing said second groups of image feature descriptors generated by said coefficient transforming means and then calculating similarity between an image accumulated in said image database and said inquired image.

10. An image retrieving method for retrieving an image being similar to an inquired image from images stored in an image database, said method comprising:

a step of transforming a first group of image feature descriptors extracted from image data accumulated in said image database and then generating a second group of image feature descriptors to be used for calculating similarity;

a step of transforming a first group of image feature descriptors extracted from image data of said inquired image and then generating a second group of image feature descriptors to be used for calculating similarity; and

a step of comparing said second group of image feature descriptors of image data accumulated in said image database with said second group of image feature descriptors of image data of said inquired image to calculate similarity.

11. The image retrieval method according to Claim 10, wherein, in said two steps in which said first group of image feature descriptors is transformed and said second group of image feature descriptors is generated, a transform of said coefficient is performed using a transform table selected depending on a kind of transform coefficient to be used as said image feature descriptor and wherein retrieval of a similar-image is performed on a trial basis using a plurality of said transform tables each having a differently segmented range of said transform coefficient and a transform table is selected which has showed a high rate of correctly solved retrieval in said retrieval on a trial basis.

12. The image retrieval device according to Claim 1, further comprising an image size resizing means for resizing image accumulated in said image database and/or inquired image in size, and an image feature descriptor producing means for performing an orthogonal transform on an image obtained by said image size resizing means and producing an orthogonal transform coefficient and using said orthogonal transform coefficient as a first group of image feature descriptors.

13. The image retrieval device according to Claim 12, wherein said image size resizing means is composed of a block dividing means for partitioning said image data into blocks, a dominant color calculating means for calculating a dominant color of each of blocks obtained by said block dividing means and an image creating means for creating an image using said dominant color of each of said blocks as a pixel.

14. The image retrieval device according to Claim 13, wherein said image creating means extracts a color average of entire pixels contained in each of said blocks as said calculated dominant color of each of said blocks.

15. The image retrieval device according to Claim 13, wherein said block dividing means partitions said image into 64 blocks.

16. The image retrieval device according to Claim 12, wherein said image feature descriptor producing means performs a discrete cosine transform (DCT) on an image obtained by said image size transforming means and extracts an obtained DCT coefficient and uses said DCT coefficient as a first group of image feature descriptors.

17. The image retrieval device according to Claim 9, further comprising an image size resizing means for resizing image accumulated in said image database and/or inquired image in size, and an image feature descriptor producing means for performing an orthogonal transform on an image obtained by said image size resizing means and producing an orthogonal transform coefficient and using said orthogonal transform coefficient as a first group of image feature descriptors.

18. The image retrieval device according to Claim 17, wherein said image size resizing means is composed of a block dividing means for partitioning said image data into blocks, a

dominant color calculating means for calculating a dominant color of each of blocks obtained by said block dividing means and an image creating means for creating an image using said dominant color of each of said blocks as a pixel.

19. The image retrieval device according to Claim 18, wherein said image creating means extracts a color average of entire pixels contained in each of said blocks as said calculated dominant color of each of said blocks.

20. The image retrieval device according to Claim 18, wherein said block dividing means partitions said image into 64 blocks.

21. The image retrieval device according to Claim 9, wherein said image feature descriptor producing means performs a discrete cosine transform (DCT) on an image obtained by said image size transforming means and extracts an obtained DCT coefficient and uses said DCT coefficient as a first group of image feature descriptors.

22. The image retrieval method according to Claim 10, further comprising an image size resizing process of resizing image accumulated in said image database data and/or inquired image in size, and an image feature descriptor producing process of performing an orthogonal transform on an image obtained by said image size process and producing an orthogonal transform coefficient and using said orthogonal transform coefficient as

a first group of image feature descriptors.

23. The image retrieval method according to Claim 22, wherein said image size resizing process is composed of a block dividing process of partitioning said image data into blocks, a dominant color calculating process of calculating a dominant color of each of blocks obtained by said block dividing process and an image creating process of creating an image using said dominant color of each of said blocks as a pixel.

24. The image retrieval method according to Claim 23, wherein said image creating process is to extract a color average of entire pixels contained in each of said blocks as said calculated dominant color of each of said blocks.

25. The image retrieval method according to Claim 23, wherein said block dividing process is to partition said image data into 64 blocks.

26. The image retrieval method according to Claim 22, wherein said image feature descriptor producing process is to perform a DCT on an image obtained by said image size resizing process and to extract an obtained DCT coefficient and to use said DCT coefficient as a first group of image feature descriptors.

27. A storage medium storing a similar-image retrieval program to cause a computer to carry out retrieval of an image being similar to an inquired image from images stored in an image

database, wherein said similar-image retrieval program includes a step of transforming a first group of image feature descriptors extracted from image data accumulated in said image database and then generating a second group of image feature descriptors to be used for calculating similarity, a step of transforming a first group of image feature descriptors extracted from image data of said inquired image and then generating a second group of image feature descriptors to be used for calculating similarity; and a step of comparing said second group of image feature descriptors of image data accumulated in said image database with said second group of image feature descriptors of image data of said inquired image to calculate similarity.